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REMARKS / DISCUSSION OF ISSUES

Claims 1-21 are pending in the application.

The Office action rejects claims 1 and 2 under 35 U.S.C. 103(a) over Schofield (USPA 2003/0122930). The applicants respectfully traverse this rejection.

Claim 1, upon which claim 2 depends, specifically recites an apparatus for detecting an approaching emergency vehicle that includes a pan, tilt, zoom camera that is controlled to provide an enhanced view of the emergency vehicle on a display.

Schofield teaches the detection of infrared (IR) signals that are transmitted by emergency vehicles but does not teach that the detection of such IR signals affects the control of a pan, tilt, zoom camera. Schofield presents this detection in the context of using infrared communications between vehicles for cruise control and high-speed convoying. Presumably, the detection of an emergency vehicle would have some affect on this cruise control and convoying capability.

Controlling the display to provide an enhanced view of an emergency vehicle is contrary to Schofield's expressed invention objectives. Schofield criticizes prior camera-based rearview mirror systems for presenting inconsistent views to the driver (Schofield's Background of the Invention). Adjusting a camera from an original view to an enhanced view of an emergency vehicle, as claimed by the applicants, constitutes providing different image sizes the same object, which Schofield expressly criticizes at paragraph 0005.

Schofield teaches forming a synthesized image from a variety of cameras to approximate a rearward-facing view from a virtual camera at a single location, preferably forward of the driver, and directed generally rearward of the vehicle. Schofield continually refers to techniques for minimizing distractions to the driver, and providing consistent views that facilitate continuous recognition without requiring the driver to adjust his/her focus and/or depth perception. The applicants respectfully maintain that changing the view on the display to provide an enhanced view of an emergency vehicle is inconsistent with Schofield's design of a consistent view system.

Schofield does teach the ability to change the views provided by the cameras, for very specific applications, such as while backing up a tractor trailer, or to provide different views

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depending upon whether the vehicle is traveling forward or backward. The changes of view are provided to facilitate control of the vehicle, and are unrelated to the detection of emergency vehicles. It would be inconsistent with Schofield's purposes to change the view presented to a driver who is backing up a tractor-trailer to provide an enhanced view of an emergency vehicle.

Because Schofield does not teach controlling a pan, tilt, zoom camera to provide an enhanced view of an emergency vehicle, as specifically claimed by the applicants, the applicants respectfully request the Examiner's reconsideration of the rejection of claims 1 and 2 over Schofield.

The Office action rejects claims 3-6 under 35 U.S.C. 103(a) over Schofield and Lee (USP 5,680,123). The applicants respectfully traverse this rejection based upon the remarks above regarding claim 1, upon which each of claims 3-6 depends, in view of Schofield, and based on the following remarks.

Claim 3 claims a forward and rearward facing camera; claim 4 claims selective display from each of the cameras; and claim 5 claims a split-screen presentation.

The Examiner acknowledges that Schofield does not teach a forward facing camera, and relies upon Lee for teaching such a camera. The applicants concur that Lee teaches the use of rearward and side facing cameras in a vehicle monitoring system, and notes that a forward facing camera may also be included.

As noted above, Schofield teaches presenting a consistent view to the driver, and specifically teaches against presentations from multiple cameras (Schofield's paragraph 0005). Presenting a forward view at the display that conventionally presents Schofield's rearward view would again be inconsistent with Schofield's teachings of presenting a consistent view.

Because Schofield teaches presenting a consistent view to a driver, and teaches against presenting multiple views to a driver, and does not teach controlling a pan, tilt, zoom camera to provide an enhanced view of an emergency vehicle, the applicants respectfully request the Examiner's reconsideration of the rejection of claims 3-6 under 35 U.S.C. 103(a) over Schofield and Lee.

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The Office action rejects claim 7 under 35 U.S.C. 103(a) over Schofield, Lee, and Strumolo (USP 6,535,242). The applicants respectfully traverse this rejection based on the comments above regarding claim 1, upon which claim 7 depends, in view of Schofield, and based on the following remarks.

Claim 7 teaches control of the pan, tilt, zoom camera via a voice recognition system. The Examiner relies upon Strumolo for teaching a voice-controlled vehicular camera system. The applicants concur with this characterization of Strumolo, but note that neither Schofield, Lee, nor Strumolo, individually or collectively, teach or suggest controlling the camera, via voice or otherwise, to provide an enhanced view of an emergency vehicle, as specifically claimed by the applicants. The applicants respectfully request the Examiner's reconsideration of the rejection of claim 7 under 35 U.S.C. 103(a) over Schofield and Lee.

The Office action rejects claims 8, 10-14, and 16-21 under 35 U.S.C. 103(a) over Schofield, Kakinami (USP 5,892,855), and Breed (USPA 2002/0005778), and claims 9 and 15 under 35 U.S.C. 103(a) over Schofield, Kakinami, Breed, and Lee. The applicants respectfully traverse the rejections of claims 8-13 based on the remarks above regarding claim 1, upon which claims 8-13 depend, in view of Schofield, and based on the following remarks. The applicants further traverse the rejection of claims 14-21 based on the following remarks.

Claims 8-21 each include tracking an emergency vehicle and controlling the pan, tilt, zoom camera to provide the enhanced view of the emergency vehicle.

The Examiner relies upon Kakinami for teaching the tracking of a particular vehicle. The applicants respectfully disagree with this characterization of Kakinami.

Kakinami teaches a forward monitoring system in a vehicle that detects an object, such as another vehicle, in the same travel lane as the vehicle, or in adjacent lanes. When an object is detected in the vehicle's travel lane, distance to the object is determined. As the vehicle continues to travel, and the object remains in the same travel lane, it continues to be detected. To accurately measure the distance to the object, the camera is adjusted to center the vehicle in the camera's field of view when it is detected in the travel lane. If the object leaves the vehicle's travel lane, it is no longer detected.

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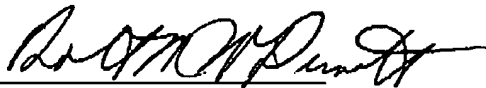
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Kakinami's FIG. 11 clearly illustrates that Kakinami's process first determines an estimation of the right and left lanes, at G10, from which a vehicle search area is determined, at G11. Kakinami's system does not distinguish among vehicles, and therefore cannot "track" a particular vehicle. Kakinami's system merely determines whether "any" vehicle is in the search area corresponding to the estimated travel lane. If another vehicle enters the search area between the vehicle and the originally detected object, the camera will be adjusted to center on the other vehicle. Similarly, if the original object leaves the travel lane that defines the search area and thereby provides a view to another vehicle in the travel lane, Kakinami's camera will be centered on the other vehicle. That is, Kakinami's system does not "track" a particular vehicle, as the term "track" is conventionally used, and as the term "track" is used in the applicants' specification. As the term "track" is conventionally used, if the target vehicle changes lanes, a "tracking" camera would be positioned to continue to "track" the target vehicle, and would not, as Kakinami teaches, be redirected to whatever other vehicle happened to be in the travel lane.

Because Kakinami does not teach the tracking of a particular vehicle, the applicants respectfully request the Examiner's reconsideration of the rejections of claims 8-21 under 35 U.S.C. 103(a) over Schofield, Kakinami, and Breed, or Schofield, Kakinami, Breed, and Lee.

In view of the foregoing, the applicants respectfully request that the Examiner withdraw the rejections of record, allow all the pending claims, and find the application to be in condition for allowance. If any points remain in issue that may best be resolved through a personal or telephonic interview, the Examiner is respectfully requested to contact the undersigned at the telephone number listed below.

Respectfully submitted,



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